REMARKS

In the pending application, claims 1-34 were presented for examination. Applicants have canceled claim 27, amended claims 1-3, 5, 6, 9, 11-13, 17-26, 28, 29, 31-34 and have added new claim 35. Claims 1-26, 28-35 are currently pending in the present application. Applicants respectfully request reconsideration of the pending claims in view of the following statements and/or amendments to the claims.

Claims 1-12, 14-18, 20-23, 25, 26, 28-30 and 32-34 were rejected under 35 U.S.C. 103(a) based on Alcorn et al. (U.S. Patent No. 6,263,498) and Stack (U.S. Patent No. 5,518,717).

Claim 1, as amended, is directed to a method for designing a software architecture for utilizing software components in building N-tier software applications. Claim 1 recites the following steps:

a) specifying a set of software component rules for developing software components;

b) specifying a set of tier rules for developing a plurality of tiers wherein each tier comprises a plurality of software components and performs a predetermined function, each software component comprising a software object, the tier rules further comprising:

i) a set of association rules by which at least one software component developed using the software component rules is associated with or disassociated from at least one tier developed with the set of tier rules;

ii) a set of tier framework rules to provide an architected context for software components associated with a tier; and

iii) a set of package rules to provide for logical grouping of interfaces within a framework defined by the tier framework rules

to provide a set of specific behaviors for the tier; and

c) specifying a set of assembly rules, the assembly rules comprising association rules by which each tier is associated with at least one other tier and linkage rules by which each tier is linked to at least one other tier.

Referring to Alcorn et al., an apparatus for managing application modification in a distributed data processing system is provided. Alcorn et al., however, provides no teaching of "specifying a set of tier rules for developing a plurality of tiers wherein each tier comprises a plurality of software components and performs a predetermined function, each software component comprising a software object", as recited in independent claim 1, as amended, and similarly recited in independent claims 18, 23, 29, 32, 33, 34, as amended. Stack also fails to teach the foregoing claim limitations.

Further, Alcorn et al. provides no teaching of tier rules comprising a set of association rules by which at least one software component developed using the software component rules is associated with or disassociated from at least one tier developed with the set of tier rules, as recited in claim 1, as amended. Further, Alcorn et al. fails to teach a set of tier framework rules to provide an architected context for software components associated with a tier, as recited in claim 1. Finally, Alcorn et al. fails to teach a set of package rules to provide for logical grouping of interfaces within a framework defined by the tier framework rules to provide a set of specific behaviors for the tier, as recited in claim 1. Stack also fails to teach the foregoing claim limitations.

Further, Alcorn et al. does not provide any teaching of specifying a set of assembly rules comprising association rules by which each tier is associated with at least one other tier and linkage rules by which each tier is linked to at least one other tier. The Examiner also agrees that Alcorn et al. fails to teach these limitations. See Office Action of February 12, 2004, page 3, lines 5-8. Further, Stack also fails to provide any teaching of specifying assembly rules for assemblying a plurality of tiers wherein each tier comprises a plurality of software objects and performs a predetermined function, as recited in claim 1, as amended.

Accordingly, because neither Alcorn et al. nor Stack teach all of a limitations of the claims 1-12, 14-16, 18, 20-23, 25, 26, 28-30 and 32-34, applicants submit that the claims are allowable over Alcorn et al. and Stack.

Applicants further submit that no proper motivation has been provided for the proposed combination of Alcorn et al. and Stack. In particular, neither reference recognizes that it is advantageous to specify tier rules for developing a plurality of software tiers wherein each tier represents a plurality of software objects for performing a predetermined function. Further, neither reference recognizes that is advantageous to specify a set of assembly rules for associating the plurality of software tiers to each other. Thus, applicant submits that there can be no motivation identified in either reference for the proposed combination, when neither reference even addresses these recited claim limitations.

Accordingly, because neither Alcorn et al. nor Stack provide any motivation for the proposed combination, applicants submit that the claims 1-12, 14-16, 18, 20-23, 25, 26, 28-30 and 32-34 are allowable over Alcorn et al. and Stack.

Claims 13, 19, and 31 were rejected under 35 U.S.C. 103(a) based on Alcorn et al. and Stack and Ozzie et al. (U.S. Patent No. 6,446,113). As discussed above, Alcorn et al. and Stack fail to teach, among other limitations, developing a plurality of tiers wherein each tier comprises a plurality of software components and performs a predetermined function, each software component comprising a software object, as recited in independent claims 1, 18, and 20 from which claims 13, 19, and 31, depend, respectively. Further, Ozzie et al. also fails to teach the foregoing claim limitations.

Accordingly, because neither Alcorn et al. nor Stack teach all of the limitations of the claims 13, 19, and 31, applicants submit that the claims are allowable over these references.

Applicants further submit that neither Alcorn et al. nor Stack indicate that asynchronous communication between software objects in their respective systems would be desirable or even needed. Accordingly, applicants submit that neither Alcorn et al. nor Stack provide any motivation for combining the teachings of Ozzie et al., in an attempt to obtain the claimed limitations. Accordingly, applicants submit the claims are allowable over the cited references.

Applicants have added claim 35 to claim particular aspects of the present invention. Support for this claim can be found within the specification. Applicants submit that no new subject matter has been added by claim 35. Claim 35 is believed to be allowable for at least the same reasons recited above with respect to claims 1-26 and 28-34.

If for any reason the Examiner feels that consultation with applicants' attorney would be helpful in the advancement of the prosecution, the Examiner is invited to call applicants' attorney at the telephone number listed below.

If there are any charges due with respect to this Amendment or otherwise, please charge them to Deposit Account No. 02-0429.

Respectfully submitted,

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